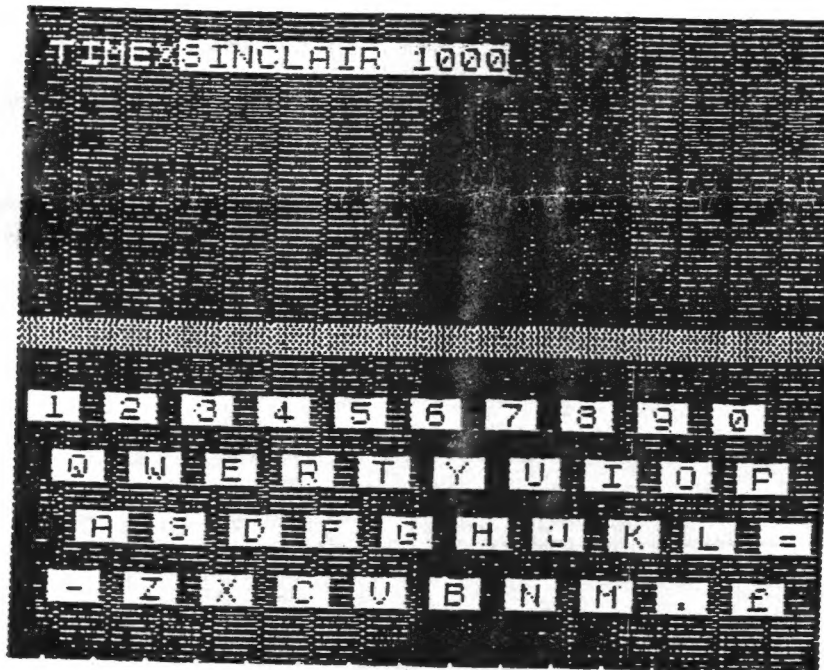


LISTing Newsletter

May 1994

**Newsletter of the Long Island
Sinclair/Timex Users Group**

Next Meeting
May 22, 1994



A 10x10 grid of 100 small, stylized, repeating patterns. Each pattern is a small, abstract, geometric shape, possibly a stylized letter or a small figure, arranged in a regular grid. The patterns are identical in each cell, creating a dense, textured background.

```

*****
# LIST # LIST # LIST # LIST #
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Listing Policy

Annual Dues \$16.00

One "sample" copy sent upon receipt of Business size SASE. Copies provided on EXCHANGE BASIS with other bona fide user groups. LISTing is published monthly except July and August by LIST (Long Island Sinclair Timex) Group, a not for profit user group.

We are always looking for articles, programs, reviews etc. to keep our members informed and entertained. You maintain full credit and copyright.

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+++++
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 U.P. BOB GILDER
 TRES. ROBERT MALLOY
 COR.SEC. JOHN PAZMINO
 EDITOR. FRED STERN
 LIBR. TOM SKAPINSKI
 +++++

PLEASE SEND INQUIRIES TO:
 LIST
 MR. HARVEY RAIT
 5 PERI LANE
 VALLEY STREAM, N.Y. 11581

PLEASE SEND SUBMISSIONS TO:
 LISTING
 MR. FREDERIC STERN
 P.O. BOX 264
 HOLBROOK, N.Y. 11741

COMING EVENTS:

MAY. 14, 1994 NEWPORT QL SHOW

MAY. 22, 1994 LIST MEETING.

 SPECIAL NOTICE

THE NEXT MEETING WILL BE HELD AT
 THE ICE CREAM DISPENSARY
 (HARVEY'S STORE)
 334 DOGWOOD AVENUE
 FRANKLIN SQUARE, N.Y.
 TEL: 516-486-1090

DIRECTIONS; SOUTHERN STATE PKWY
 TO EXIT 17 NORTH (HEMPSTEAD AVE)
 GO TO FIRST TRAFFIC LIGHT,
 LEFT TURN ON TO CORNWALL,
 NEXT TRAFFIC LIGHT, BEAR RIGHT
 ON TO DOGWOOD AVENUE. GO 1 MILE
 TO THE ICE CREAM DISPENSARY, IN
 A SMALL SHOPPING CENTER ON THE
 LEFT SIDE OF THE ROAD.

MEETING MINUTES

 REPORTED BY: TOM SKAPINSKI.
 APR. 10, 1994

 THE MEETING WAS CALLED TO ORDER
 BY HARVEY AT 2:00PM

IN THE MAIL, WE RECEIVED 1 RE-
 NEWAL.

WE ALSO RECEIVED A LETTER FROM
 AN AUSTRIA SPECTRUM USERS GROUP
 REQUESTING AN EXCHANGE OF PRO-
 GRAMS AND INFORMATION. HARVEY
 VOLUNTEERED TO ANSWER IT.

OUR NEXT MEETING HAS BEEN
 CHANGED TO MAY 22, 1994 TO
 ACCOMMODATE OUR MEMBERS WHO ARE
 GOING TO THE QL SHOW IN NEWPORT.

THE MEETING ENDED AT 3:00 PM.

CLASSIFIEDS

 THIS CLASSIFIED SECTION IS
 AVAILABLE TO ALL LIST MEMBERS
 FREE OF CHARGE.
 THE ONLY RESTRICTION IS THAT
 IT IS TO BE USED ONLY FOR THE
 SEEKING, SELLING OR SWAPPING
 OF SINCLAIR, TIMEX OR MICROACE
 COMPUTER EQUIPMENT, PERIPHERALS
 AND SOFTWARE.
 LISTING, LIST, AND ITS OFFICERS
 DO NOT ENDORSE, WARRANTY, OR
 GUARANTEE ANY OF THE ITEMS
 LISTED IN THIS CLASSIFIED
 SECTION

THE FOLLOWING PUBLICATIONS ARE
 AVAILABLE ONLY THROUGH LIST:

ZX-81/TS1000 TECHNICAL TIDBITS
 TECHNICAL TIDBITS PART II
 SAVINGS AND LOAD OF THE TIMEX
 COMPUTER
 \$4.00 EACH.

FOR SALE: TIMEX PRINTER PAPER,
 3 ROLLS - \$5.00+ POSTAGE.
 CONTACT: FRED STERN 516-737-0963
 EVENINGS AND WEEKENDS.

I AM LOOKING FOR AN AERCO DISK
 DRIVE INTERFACE FOR THE TS1000.
 I WILL CONSIDER A PURCHASE
 EITHER WITH OR WITHOUT DRIVES.
 I WILL EVEN CONSIDER A U-REPAIR.
 FRED STERN 516-737-0963. EVEN-
 INGS AND WEEKENDS.

FOR SALE; COMMODORE C-64 COM-
 PUTER, 2 DISK DRIVES, OKIDATA
 COLOR PRINTER, GAMES. ASKING
 \$150.00, CALL MR. MARCELLO
 GALLUZZO, 516-763-2650 EVENINGS.

A FINAL WORD

 MY NAME IS FRED STERN AND I AM
 THE EDITOR OF THIS EDITION OF
 LISTING.

THANK YOUS TO TOM SKAPINSKI, AND
 BOB GILDER FOR THERE HELP AND
 CONTRIBUTIONS TO THIS ISSUE.

A VERY SPECIAL THANK YOU TO
 HARVEY FOR HIS HOSPITALITY, AND
 THE USE OF HIS STORE FOR OUR
 MEETING. ALSO TO MIKEY FOR HIS
 CONTRIBUTIONS.

SEE YOU ALL AT THE NEXT MEETING.

MAY 1994

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1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

LIST MEETING 15TH

QL CORNER

This month I would like to share with our readers of LIST an idea. This idea has been proven to work by myself and it is about printing those characters your printer conceals within its Graphic Character sets.

Before we enter into the world of printing from Graphic Character sets, I feel that some of my printer background may be in order. At the end of 1992 I purchased a printer, the ITOH 8510-A PROWRITER printer. It was purchased instead of an EPSON because it was a 'well built' device; approximately twice the weight of an EPSON FX80 printer. Ribbons for this printer were also moderately priced with comparison to the EPSONs.

When it arrived, I immediately connected it to my ZX81 through an interface kit purchased from a 'cottage industry' kit maker. I forget the name of this supplier as well as the interface nomenclature. Any way the printer did print out correspondence for me and I was in 'heaven'.

There were two manuals supplied with the printer. After I read through both of these manuals, it dawned upon me that there was more to a computer printer than just printing plain text. Within the manual's contents, printer control codes were discussed in detail. Now I began to think about programming the computer to program the printer for high-lighting text with Bold characters, Double-width and double-height characters, pitch changes from 10 character per inch to 12 characters per inch and proportional printing and some other types of characters.

The other type of available characters had to be accessed from the printer's Graphic Character set and if this wasn't enough to deal with, I began defining Graphic Characters with Bit Image graphic characters. I really began to think very hard about what I was about to get into. Well, I spent approximately three weeks devoting all of my available time for this project and I was quite happy with the results received!

Several printers later I purchased the Panasonic KX-P 1124 printer as this device was capable of letter quality work in combination with five different character pitches and six different character fonts. There are four Graphic Character sets, EPSON 1 and 2 and IBM 1 and two, providing many graphic characters which I could - and I now use them.

I am sorry about the 'shaggy dog' story above - I want you to know about my printer background and that what I will explain to you is REAL and does work!

Before you attempt to extract characters from a Graphic Character set from within your printer, you must first send a short code sequence to the printer advising it that you want to access a Graphic Character set; CHR\$(27); CHR\$(116); CHR\$(1) which alerts the printer that you are ready to select an Alternate Character set.

Then another sequence is given: CHR\$(27); CHR\$(54) to enter into the EPSON #2 Graphic Character set. The above codes are identical with IBM character sets.

All of the Graphic character sets have the same ASCII characters used for printing text which appear on the QL's keyboard with one exception. The £ character isn't available on the EPSON #1 Graphic Character set. If you view your copy of Quill's printer_dat file, you will see that Translate 1 provides the £ character to be printed from International character set #3 (UK) and after the £ character has been printed, it returns to International character set 0 (USA). Within Graphic Character set #2, the £ character can be printed out with codes CHR\$(27); CHR\$(156).

The only remaining Character set that you will not be able to access after you enter a Graphic Characterset is the ITALICS set. Italics are part of your original character set and lies above CHR\$(128). However, you can return to the original character set with a software reset as follows: CHR\$(27); CHR\$(116); CHR\$(0). On the SuperBASIC listing below, you can add LINE 145 with the above three code sequence. This will reset your printer to the default Character set after the graphic characters have been printed.

Before you go about developing a new version of printer_dat, you must first look into your printers manual for the Graphic tables or you can key in the program below and run it. If the 2nd Graphic set is installed in your printers ROM, you will get a printout of all characters from CHR\$(32 to 255). My printer balks at the REM statements within a program accessing graphic characters, so it may be benneficial for you to eliminate them from the program. One other quirk I get is that sometimes the last 10 characters are not printed out. If this happens to you, add 10 to the final number, making it 265 and it will print out the entire set of characters.

```

100 OPEN #3, ser1 :REMark Open Channel #3 and assign ser1 as output
105 PRINT #3, CHR$(27); CHR$(120); CHR$(1); :REMark Select Letter Quality
110 PRINT #3, CHR$(27); CHR$(116); CHR$(1); :REMark Select Alternate Character
    set
120 PRINT #3, CHR$(27); CHR$(54); :REMark Select Graphic Characterset #2
130 FOR i = 32 TO 255 :REMark Loop for Graphic Characters 32 through 255
132 REMark If the printer balks at printing the last 10 characters, change 25
    5 to 265, it should force printing.
135 PRINT #3, CHR$(i); " "; :REMark Print each Graphic Character with one space
    between each character
140 NEXT i :REMark End Loop
150 CLOSE #3 : REMark Close Channel #3

```

!"#\$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMN O PQRSTU VWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~ÇüéääåäçèéëïíîïËÆæœøðùúÿÜÜç£¥¦§¨ª«¬®¯°±²³´µ¶·¸¹º»¼½¾¿ÀÁÂÃÄÅÆÇÈÉÊËÌÍÎÏÐÑÒÓÔÕÖ×ØÙÚÛÜÝÞßàáâãäåæçèéêëìíîïðñòóôõö÷øùúûüýþÿ

The actual printout of the EPSON #2 Graphic Character Set

OK - we've gone this far and I think it is time for an experiment if you use Quill. After you have accessed the short program above, the 2nd characterset will be available for use within Quill. From BASIC, CTRL-C into Quill and type in a line such as this:

This is the £ character from the 2nd Graphics Character set.

Do not type in the '£' character. Instead, type in the key combination of CTRL, SHIFT and , (comma) which represents CHR\$(156). This key combination will print a B with a tail on the bottom (Greek character beta). Look up pages 5 through 9 of the QL manual under the Concepts section where it provides the ASCII codes for keyed characters. Look for CHR\$ 156 and the CTRL key sequence will be identical as stated at the beginning of this paragraph. Please note that not all combinations of key presses will produce a character on the screen which is necessary for printing the graphic characters from the Graphic Character sets. Experiment!!!!

Now for my confession: Normally I do not use Quill or any other word processor for producing documentation. I use a text editor; The EDITOR SE. For approximately six years this program has excited me to such an extent, that it has actually forced me to experiment continuously, thus developing a simple system of using each and every Graphic character from whatever Graphics Character set is accessed.

Don't worry if you do not get satisfactory results at first - try again! If you are afraid that you will screw up your printer, again do not worry. Just switch off your printer for a second or two and then switch it on. It will now be in the default character set mode.

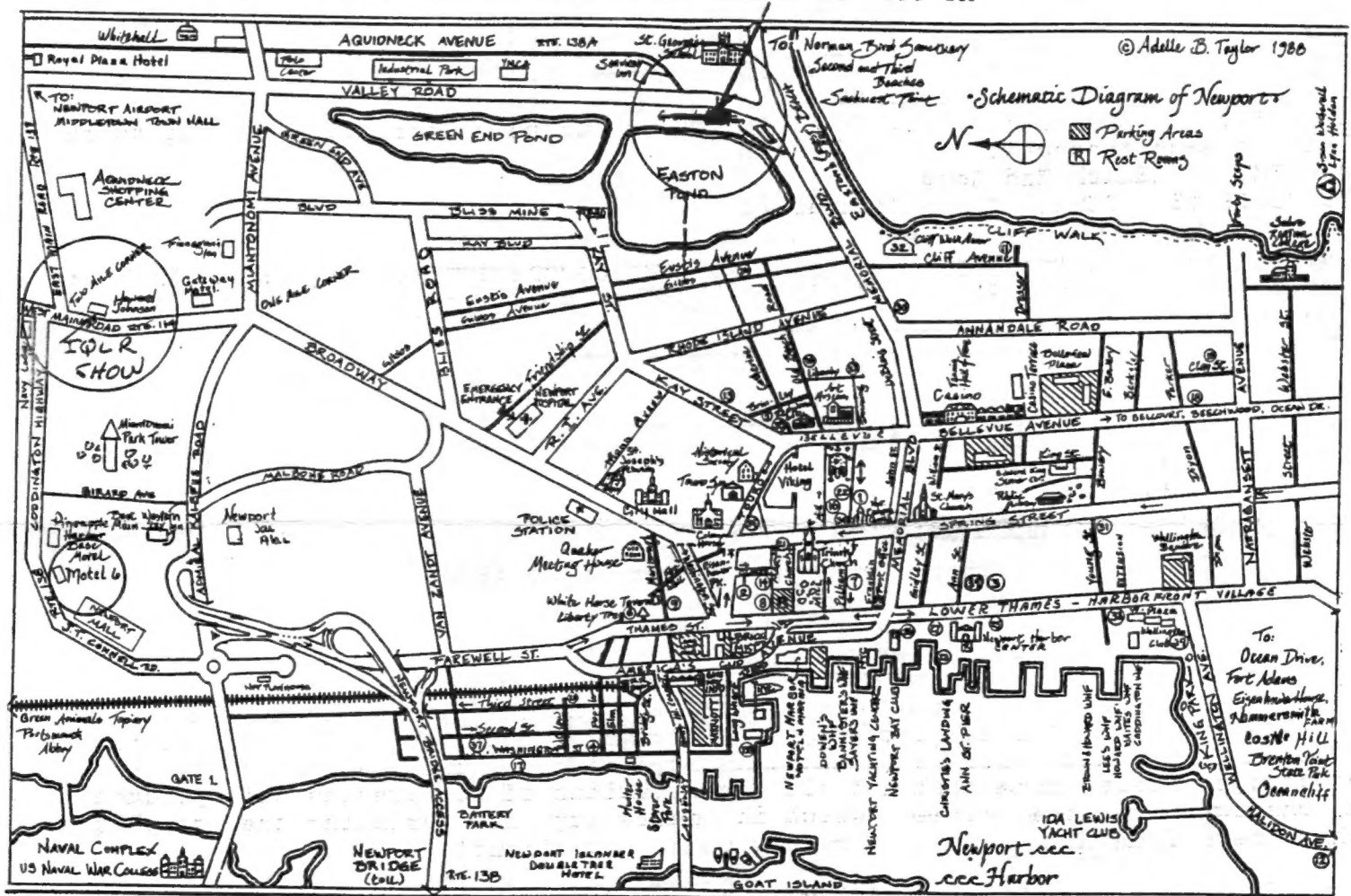
If you have good results with this method, prepare a simple SuperBASIC program for accessing the Graphic Character set of your choice and add it to your BOOT program using lines 100, 110 and 120 from the above SuperBASIC listing. Just change the line numbers to suit your BOOT program.

If I have aroused your interest about printing from the graphic table and you would like me to continue on with this subject, please contact me through LIST or at my home address:

Bob Gilder 69 Jefferson Place, Massapequa, NY 11758

The following map of Newport, RI, depicting the hotel locations for the IQLR show in Newport, May 14th, has been submitted by LIST member Joe La Punzina. I hope to see some of you in Newport. Bob Gilder

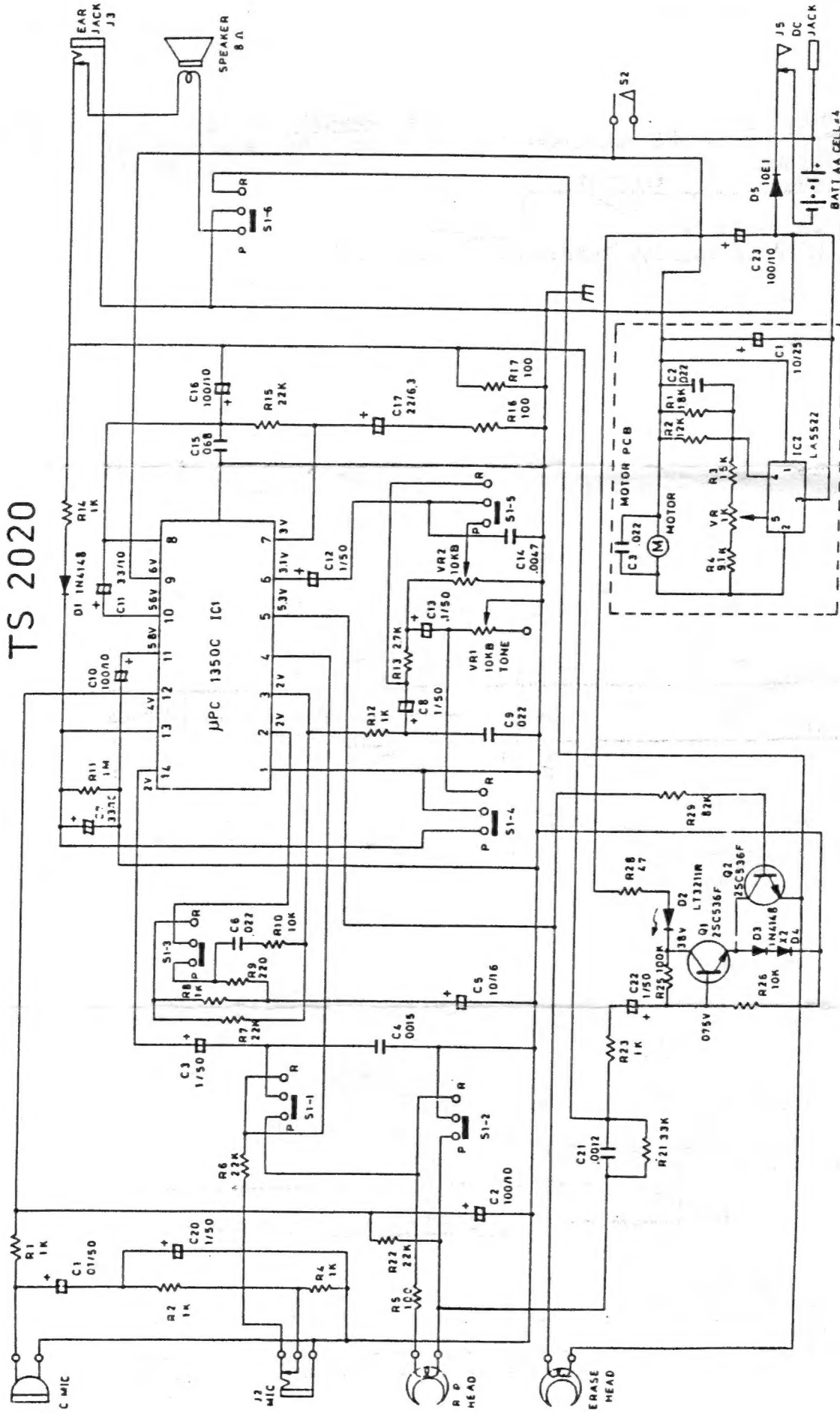
The Newport Beach Club - Dutch treat dinner at 7:00 PM



TRAFFIC INFORMATION: Right Turn on Red Light, After Stop -- EXCEPT where prohibited. Pedestrians on crosswalks have right-of-way. NO DRINKING on public streets, sidewalks, parks, in cars, ALL vehicles MUST travel WITH traffic ... observe one way streets! No Parking (Cars Towed) in Fire Lanes, Loading Zones, private lots, driveways, yellow curbs. Newport EMERGENCY: 847-1212 ... Fire/Rescue: 846-2211 ... Hospital, 846-6400.

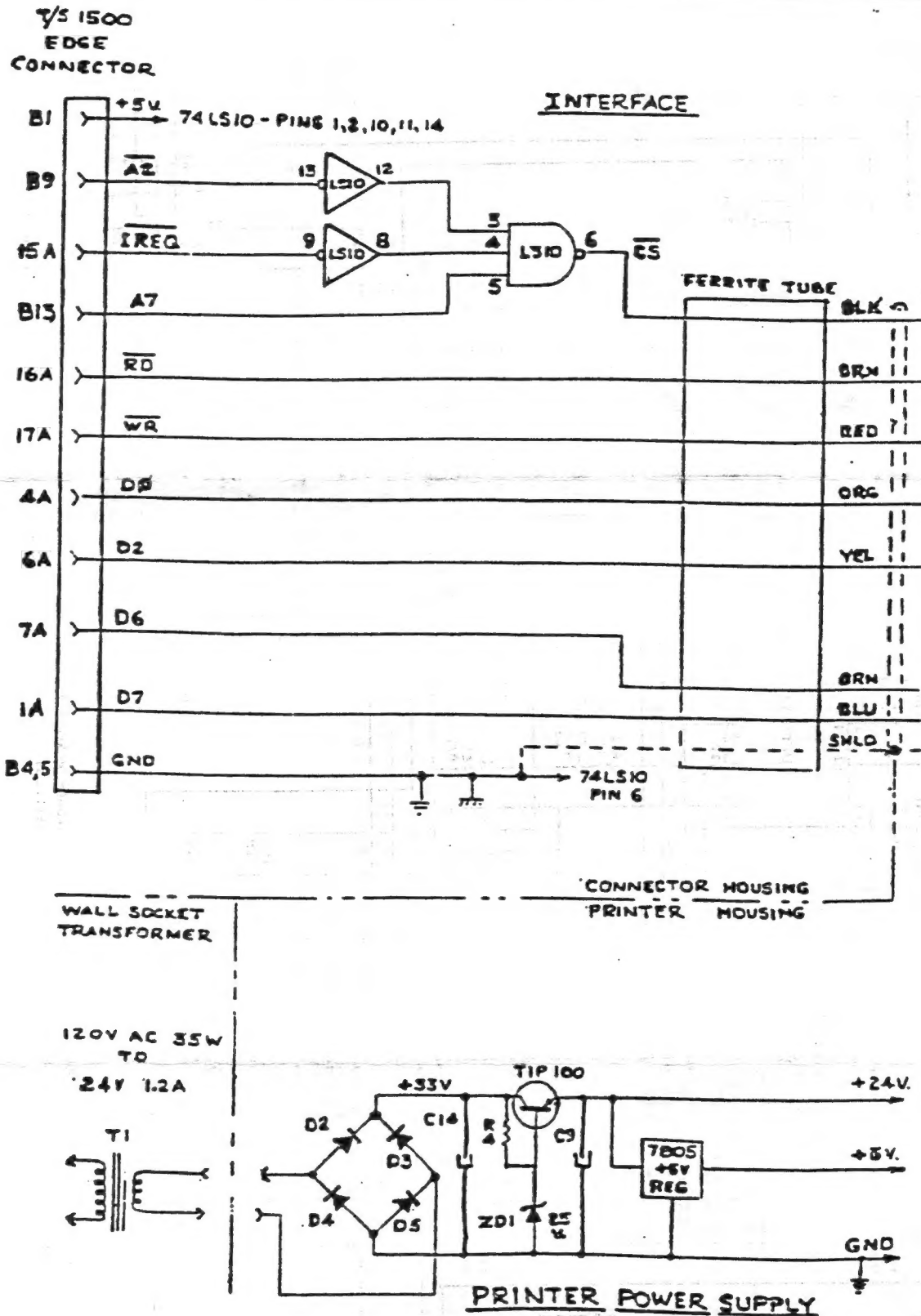
SCHEMATIC DIAGRAM

TS 2020



- IC1 JPC1350C
IC2 LA5522
IC3 LA5522
C1 0.1/50
C2 100/10
C3 1/50
C4 0.0015
C5 10/16
C6 0.022
C7 0.022
C8 1/50
C9 0.022
C10 100/10
C11 33/10
C12 1/50
C13 1/50
C14 0.0047
C15 0.068
C16 100/10
C17 22/6.3
- R1 1K
R2 1K
R3 1K
R4 1K
R5 100
R6 22K
R7 22K
R8 1K
R9 1K
R10 10K
R11 1M
R12 1K
R13 27K
R14 1K
R15 22K
R16 100
R17 100
R18 10K
R19 10K
R20 10K
R21 33K
R22 22K
R23 1K
R24 1K
R25 82K
R26 10K
R27 27K
R28 27K
R29 82K
- D1 1N4148
D2 2SC536F
D3 1N4148
D4 2SC536F
D5 10E1
- Q1 LT3211R
Q2 2SC536F
- S1-1
S1-2
S1-3
S1-4
S1-5
S1-6
S1-7
S1-8
S1-9
S1-10
S1-11
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S1-96
S1-97
S1-98
S1-99
S1-100
- NOTES
1 ALL RESISTANCE VALUES ARE IN Ω K=1000 Ω M=1000K
2 ALL CAPACITANCE VALUES ARE IN μ F P=10 μ F
3 ALL RESISTORS ARE 1/6 WATT UNLESS OTHERWISE SPECIFIED
4 VOLTAGES MEASURED FROM POINT INDICATED TO CHASSIS GROUND WITH V.T.M. WITH VOLUME AT MIN AND NO SIGNAL.

T/S 2040 PRINTER SCHEMATIC



Thanks to our newsletter exchange program, we can bring you these 2040 schematics.

FIGURE 10-5 T/S 2040 PRINTER

8410925 TRACED BY JIM LEE

8405000

BY DOG ORAFELT

The T/S 2040 printer, manufactured by Alphacom, prints 32 characters per line on special heat sensitive paper at a horizontal density of 10 cpi and a vertical density of 8.25 cpi and a speed of 8 character lines per second. Each character line is printed as a continuous line of 32 - 254 bits per line. The bits are transmitted in bursts of 32 - 254 bits per line. Special electronics distribute the bits through data line D7. Internal timing to the proper one of 32 - 254 bits per line. After a bit line is printed, a motor advances the paper by one bit (1/64.2").

The motor is a synchronous motor consisting of an SM4210M is contained in the motor which is basically a feedthrough type with the female side connected to the computer and the male side for additional interfacing.

The address lines A2 and A7 and the data lines D2, D3, D4, D5, D6, D7 and signal lines WR and RD are connected to the printer. These lines are connected to the printer in a shielded cable. The power for the selector chip, contained in the connector is provided by the computer, using a chip of the LS-line. The printer obtains about 25 volts a.c. from the power supply. In stand-by mode it consumes about 0.13 Amperes and in printing mode about 0.21 Amperes. An internal rectifier provides the power for the electronic circuitry.

The printer is not connected, all 8 data lines are high. (ZP) When the printer is pulled (ZP) when the power comes on D2 and D5 are pulled low. (ZP) This connection of D2 in the Read-mode is not shown in the printer's Technical Manual. As long as the printer is busy printing a bit Do is also low. (3A)

After the whole bit line is printed, Do, D2, D4 are pulled low. (3A)

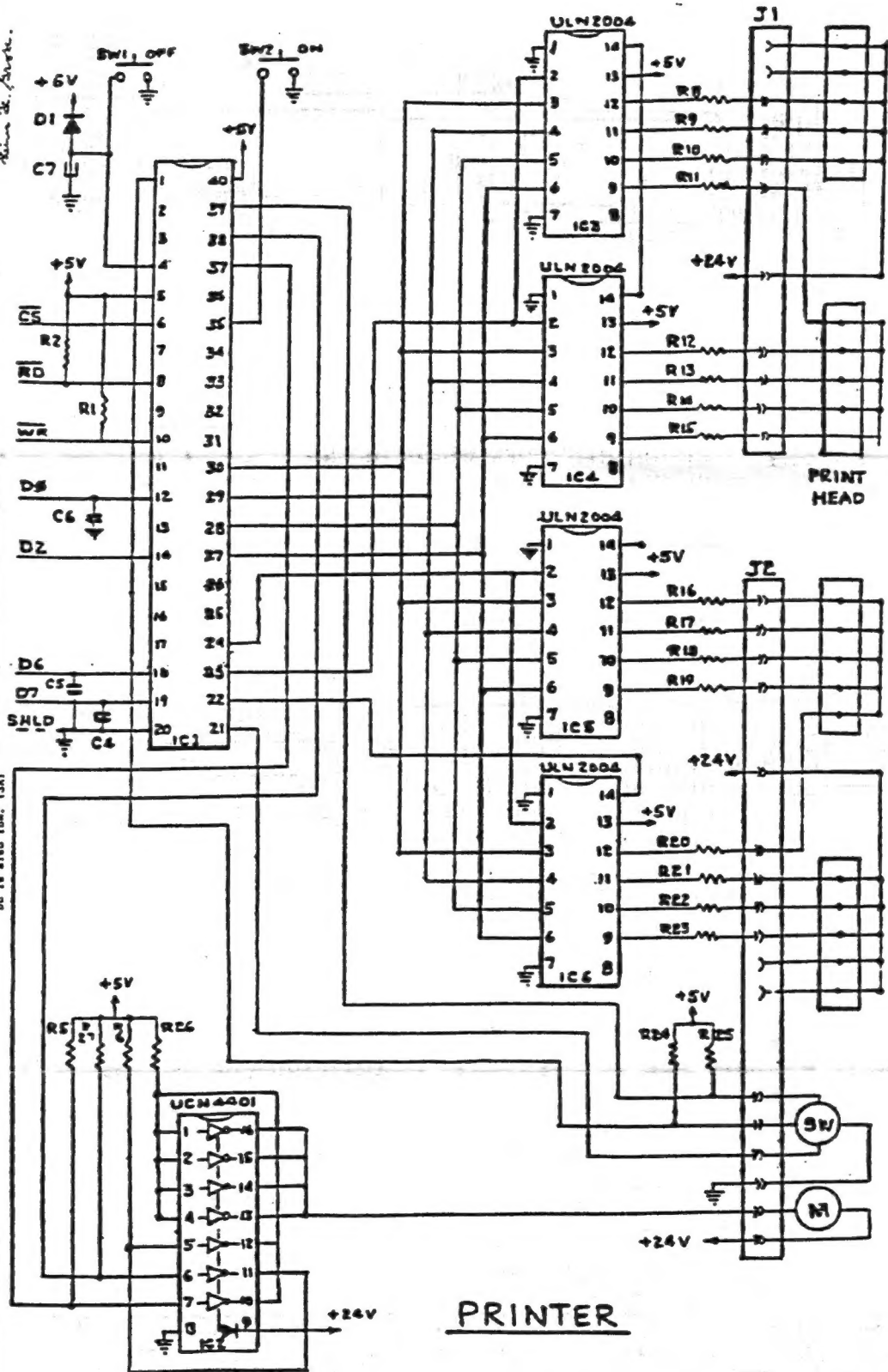
Do starts printing, an output command OUI (F8), A with D2 low. (3A)

Each time a bit is transferred, an IN A, (F8) command has to test Do. When it is low, the bit can be transmitted through D7 by OUI (F8), A. (where A is either 00 or 01, according to whether a space or a dot has to be printed). If this is not done, the motor has to be stopped by outputting 04 to port F8. If this is not done, an additional bit line is printed.

No motor for Do change, as indicated in the TIMEX 2040 Technical Manual for Do change, selected.

It is essential, to disable the motor during the print process since otherwise the always present display, which will disturb the print flow, provided by the internal timing.

Thin 2x 2/8 inch

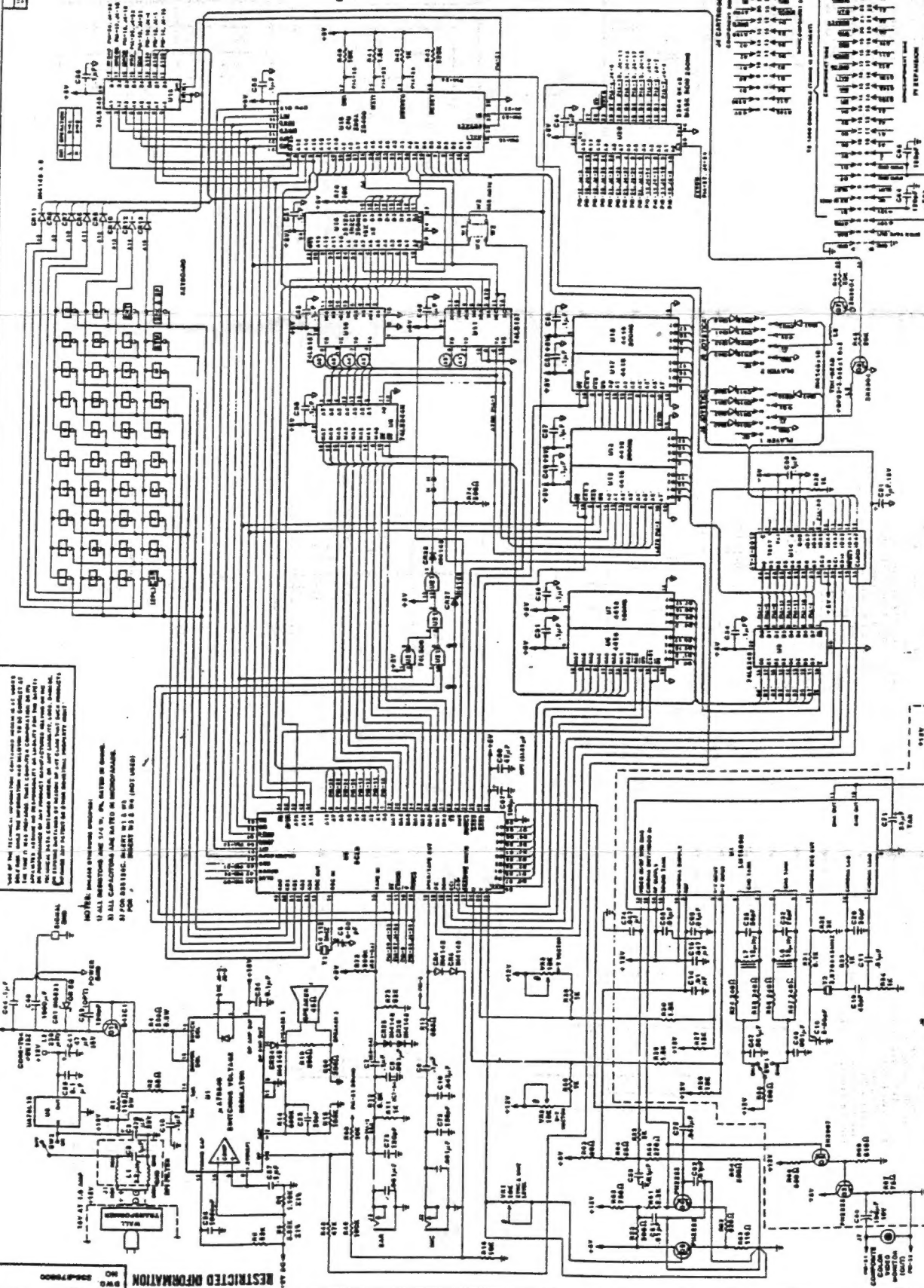


PRINTER

B4#5090
TS 2040 PRINTER
SCHEMATIC
BY ROR CORRECT

CHANGES

REFERENCE DESIGNATION	VALUE	UNIT
C10	0.1	μF
C11	0.1	μF
C12	0.1	μF
C13	0.1	μF
C14	0.1	μF
C15	0.1	μF
C16	0.1	μF
C17	0.1	μF
C18	0.1	μF
C19	0.1	μF
C20	0.1	μF
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C95	0.1	μF
C96	0.1	μF
C97	0.1	μF
C98	0.1	μF
C99	0.1	μF
C100	0.1	μF



TIMEX
TIMEX 7800B SYSTEM
SCHEMATIC DIAGRAM
DWG NO 238-870800

DO NOT SCALE DRAWING
DATE: 1964-10-14
BY: J. H. HUGHES
CHECKED: J. H. HUGHES
APPROVED: J. H. HUGHES

REVISIONS
REV. NO. 1
DATE: 1964-10-14
BY: J. H. HUGHES
REASON: INITIAL DESIGN

REVISIONS
REV. NO. 2
DATE: 1964-10-14
BY: J. H. HUGHES
REASON: CORRECTION OF ERROR

REVISIONS
REV. NO. 3
DATE: 1964-10-14
BY: J. H. HUGHES
REASON: CORRECTION OF ERROR

REVISIONS
REV. NO. 4
DATE: 1964-10-14
BY: J. H. HUGHES
REASON: CORRECTION OF ERROR

REVISIONS
REV. NO. 5
DATE: 1964-10-14
BY: J. H. HUGHES
REASON: CORRECTION OF ERROR

Notes:
1. All components are to be of the highest quality available.
2. All components are to be of the highest quality available.
3. All components are to be of the highest quality available.

Notes:
4. All components are to be of the highest quality available.
5. All components are to be of the highest quality available.
6. All components are to be of the highest quality available.

RESTRICTED INFORMATION

122—Graphics shifted 8.

```

75 DATA 4,4,4,4,0
76 RESTORE 75; FOR J=1 TO 4: R
EAD X: BEEP .25*(1+J+(J=4)):X: N
EXT J
80 PRINT AT 21,0: FLASH 1: INK
3: PAPER 5:"SCORE:";SC;"standb
y for take-off": PAUSE 300
81 PAPER 0: FOR J=20 TO 0 STEP
-1
82 PRINT AT J+1,J+1:" "AT J:
J: INK 1+INT (RND*6)"/="
84 NEXT J: GO TO 20
100 IF J=21 THEN RETURN : IF S=
1 THEN LET M=J+1
101 IF S=-1 THEN LET M=J+2-(J=20
)
102 IF S=1 THEN LET H=K+2: IF S
=1 THEN LET D=D/2
103 IF S<0 THEN RETURN
104 PRINT AT M-1,H:" "AT M,H:
Y:"BEEP .005,21-M: LET M=M+1
105 IF SCREEN$(M,H)<>" " THEN
GO TO 119
106 IF M<21 THEN RETURN : IF M>
21 THEN LET M=21: GO TO 120
119 LET SC=SC+10
120 IF M=21 THEN LET M=21
121 PRINT AT M-1,H: PAPER 0:" "
FOR N=7 TO 0 STEP -1
122 PRINT AT M,H: INK N:" ": BE
EP .02,N-12
124 NEXT N
126 LET S=-1: LET D=D*2: RETURN
140 PRINT AT J,K-2:" "
142 DATA 0,0,0,-5,-5,-5,0
144 RESTORE 142: INK 2
146 FOR N=1 TO 7: READ X: CIRCLE
K*6+4,(21-J)*6,N: BEEP .05*(1+
S*(N=7)):X: NEXT N
148 PRINT AT 11,10: PAPER 6: IN
K 1:"SCORE:";SC
9996 STOP
9997 REM citybomb
9998 REM © E.WRIGLEY 29/7/82
9999 SAVE "citybomb": RUN

```